

AMENDMENTS TO THE CLAIMS

This listing of claims replaces all prior versions, and listings, of claims in the application:

1-28. Canceled

29. (previously presented) A building beam structure comprising:

two sheet metal chords, each of the chords having a flat end wall,
two opposed side walls extending from the end wall and having respective flat fastening surfaces to which materials may be connected, and
two angular support walls, each of the angular support walls extending from one of the side walls, and the angular support walls converging inwardly from the side walls;
and
a sheet metal central web section disposed between the two chords and including
a substantially flat main web wall extending straight between one of the angular support walls on each of the chords,
a first web wall section extending from another of the angular support walls on one of the chords, and
a second web wall section extending from another of the angular support walls on another of the chords.

30. (previously presented) A building beam structure of claim 29 further comprising fastening devices connecting the first and second web wall sections with the main web wall.

31. (previously presented) A building beam structure of claim 29 wherein the two sheet metal chords and the sheet metal central web section are made from a single piece of sheet metal.

32. (currently amended) A building beam structure of claim 29 wherein the two sheet metal chords and sheet metal central web section are made from a single piece of sheet metal having a thickness in the range of from approximately ~~[[16]]~~18-gauge to approximately ~~[[24]]~~20-gauge.

33. (previously presented) A building beam structure of claim 29 wherein the two sheet metal chords and sheet metal central web section are made from a single piece of approximately 20 gage sheet metal.

34. (previously presented) A building beam structure of claim 29 wherein the end wall of one chord is substantially parallel to the end wall of the other chord.
35. (previously presented) A building beam structure of claim 29 wherein the side walls are substantially perpendicular to each end wall.
36. (previously presented) A building beam structure of claim 29 wherein the central web section is substantially perpendicular to each end wall and substantially parallel to the side walls.
37. (previously presented) A building beam structure of claim 29 wherein each end wall is disposed in a generally horizontal direction and the central web section is disposed in a generally vertical direction.
38. (previously presented) A building beam structure of claim 29 wherein each end wall on each of the chords has two opposed longitudinal lateral edges.
39. (previously presented) A building beam structure of claim 38 wherein each of the two side walls on each of the chords has first and second longitudinal edges with the first longitudinal edge of each of the side walls being connected to one of the longitudinal lateral edges of one of the end walls.
40. (previously presented) A building beam structure of claim 39 wherein each of the two angular support walls on each of the chords has first and second longitudinal edges with the first longitudinal edge of each of the angular support walls being connected to the second longitudinal edge of one of the side walls.
41. (previously presented) A building beam structure of claim 40 wherein the main web wall of the central web section further comprises two longitudinal edges with one of the longitudinal edges being connected to the second longitudinal edge of one of the angular support walls on one of the chords and the other of the longitudinal edges being connected to the second longitudinal edge of one of the angular support walls on the other of the chords.
42. (previously presented) A building beam structure of claim 41 wherein the first web wall section of the central web section further comprises a longitudinal edge connected to the second longitudinal edge of the other of the angular support walls on one of the chords.

43. (previously presented) A building beam structure of claim 42 wherein the second web wall section of the central web section further comprises a longitudinal edge connected to the second longitudinal edge of the other of the angular support walls on the other of the chords.
44. (previously presented) A building beam structure of claim 29 further comprising a plurality of holes spaced longitudinally along the central web section and sized to receive apparatus for utilities.
45. (previously presented) A building beam structure of claim 29 wherein one of the side walls of one chord is cosubstantially flat with one of the side walls of the other chord, and the other of the side walls of the one chord is cosubstantially flat with the other of the side walls of the other chord.
46. (previously presented) A building beam structure comprising:
upper and lower sheet metal chords, each of the chords having
a flat end wall,
two opposed side walls extending from the end wall and having respective flat fastening
surfaces to which materials may be connected, and
two angular support walls, each of the angular support walls extending from one of the
side walls, and the angular support walls converging inwardly from the side walls;
sheet metal substantially flat web walls extending from the angular support walls
intermediate the upper and lower chords; and
fastening devices connecting the web walls together, thereby providing a sheet metal
beam structure having upper and lower chords and an intermediate web.
47. (previously presented) A building beam structure of claim 46 wherein the web walls further
comprise
a main web wall extending between one of the angular support walls on each of the upper
and lower chords,
a first web wall section extending from another of the angular support walls on the upper
chord, and

a second web wall section extending from another of the angular support walls on the lower chord, the fastening devices connecting the first and second web wall sections with the main web wall.

48. (currently amended) A building beam structure of claim 46 wherein the web walls further comprise

~~a first pair of web wall sections, each of the first pair of web wall sections extending from one of the angular support walls on the upper chord~~

~~a second pair of web wall sections each of the second pair of web wall sections extending from one of the angular support walls on the lower chord.~~

a first web wall section extending from one of the angular support walls on one of the chords, and

a second web wall section extending from another one of the angular support walls on another of the chords.

49. (previously presented) A building joist structure comprising:

first and second sheet metal chords, each of the chords having

a flat end wall with opposed longitudinal lateral edges,

two generally parallel side walls, each of the side walls having

a longitudinal first edge extending from one of the longitudinal lateral edges of the end wall,

a longitudinal second edge, and

a flat fastening surface between the first and second longitudinal edges of the side wall to which materials may be connected,

two angular support walls converging inwardly from the side walls, each of the support walls having

a longitudinal first edge extending from the longitudinal second edge of the side wall, and

a longitudinal second edge;

a sheet metal central web section connected between the two chords and including

a substantially flat main web wall having

a longitudinal first edge extending from the longitudinal second edge of the one of the support walls on the first chord, and

a longitudinal second edge extending from the longitudinal second edge of one of the support walls on the second chord, and
a first web wall section having a longitudinal first edge extending from the longitudinal second edge of another of the support walls on the first chord, and
a second web wall section having a longitudinal first edge extending from the longitudinal second edge of another of the support walls on the second chord, the first and second web wall sections extending adjacent the main web wall; and
fastening devices connecting the first and second web wall sections with the main web wall.

50. (previously presented) A building joist structure comprising:
a single sheet metal piece having upper and lower opposed chords connected by a generally vertical web section;
each of the chords having five walls including
a generally horizontal flat end wall,
two generally vertical side walls connected along upper longitudinal edges to the end wall, the side walls having respective flat fastening surfaces to which materials may be connected, and
two angular support walls connected along upper longitudinal edges to lower longitudinal edges of the vertical side walls, the angular support walls converging inward from the vertical side walls; and
the web section including
first substantially flat web wall connected to first angular support walls on each of the top and bottom chords,
a second web wall connected to a second angular support wall on the upper chord, and
a third web wall connected to a second angular support wall on the lower chord.
51. (previously presented) A building beam structure of claim 50 further comprising fastening devices connecting the second and third web walls with the first web wall.

52. (previously presented) A building beam structure of claim 51 further comprising a plurality of holes spaced longitudinally along the central web section and sized to receive apparatus for utilities.

53. (previously presented) A building beam structure of claim 51 wherein one of the side walls of one chord is cosubstantially flat with one of the side walls of the other chord, and the other of the side walls of the one chord is cosubstantially flat with the other of the side walls of the other chord.

54. (currently amended) A building beam structure comprising:

two sheet metal chords, each of the chords having

a flat end wall,

two opposed side walls extending from the end wall and having respective flat

fastening surfaces to which materials may be connected, and

~~one~~ two angular support walls, each of the angular support walls extending from one of the side walls, and the angular support walls converging inwardly from the side walls; and

a sheet metal central web section disposed between the two chords and including

a substantially flat main ~~substantially flat~~ web wall extending straight between ~~another of the side walls~~ one of the angular support walls on each of the chords,

a first web wall section extending from one of the angular support walls on one of the chords, and

a second web wall section extending from one of the angular support walls on another of the chords.

55. (previously presented) A building beam structure of claim 54 further comprising fastening devices connecting the first and second web wall sections with the main web wall.

56. (previously presented) A building beam structure comprising:

two sheet metal beam components, each of the beam components having

a flat end wall,

two opposed side walls extending from the end wall and having respective flat fastening surfaces to which materials may be connected,

two angular support walls, each of the angular support walls extending from one of the side walls, and the angular support walls converging inwardly from the side walls, and

~~two~~ a first and a second sheet metal web wall[[s]], each of the web walls extending from one of the angular support walls the first web wall extending from one angular support wall and the second web wall extending from another angular support wall,

the two beam components being disposed with respect to each other such that ~~the web walls of one of the beam components overlap the web walls of the other of the~~ a substantially flat main web wall is disposed between the beam components; and fastening devices connecting the first and second web walls to the substantially flat main web wall, thereby providing a beam structure having opposed end walls with intermediate and interconnected web walls.